

**Figure 30** Comparison between experimental (symbols) flow reactor oxidation data for  $\phi = 1.24$  as investigated by Norton and Dryer [6] and the numerical calculations (lines) using the detailed chemical kinetic model. The numerical results were time "shifted" by ca. -23 msec. Experimental conditions: 5.81%  $C_2H_5OH$ , 1.407%  $O_2$ , and 98.012% Nitrogen, Reynolds Number = 4900, P = 1 atm, and  $T_{in}$  = 1100 K. Numerical simulations shown for  $CH_3HCO$ ,  $C_2H_4$ ,  $CH_4$ ,  $C_2H_6$ , and  $C_2H_2$ .